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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,422	11/05/2003	Ernst Engler	A01498	8336
21898 7590 02/27/2007 ROHM AND HAAS COMPANY PATENT DEPARTMENT 100 INDEPENDENCE MALL WEST PHILADELPHIA, PA 19106-2399			EXAMINER ROGERS, JAMES WILLIAM	
			ART UNIT	PAPER NUMBER
			1618	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/27/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/702,422	Applicant(s) ENGLER ET AL.	
	Examiner James W. Rogers, Ph.D.	Art Unit 1618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form/PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>05/14/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

Claims 3-5 and 7-10 are generic to the following disclosed patentably distinct species: the isothiazolone biocides DCOIT and BBIT. The species are independent or distinct because a search for one biocide such as DCOIT would not necessarily incorporate BBIT. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

During a telephone conversation with Mr. Crimaldi on 2/14/2006 a provisional election was made without traverse to prosecute the species DCOIT. Affirmation of this election must be made by applicant in replying to this Office action.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 6 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a isothiazolone biocide, does not reasonably provide enablement for one organic compound having melting point in a range of 30°C to 60°C. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims. Claims 1 and 6 are reach through claims, because the scope of the currently recited limitation of one organic compound having a melting point in the range of 30°C to 60°C would read on organic compounds yet to be characterized or synthesized which could have the same claimed properties. The examiner suggest deleting the word "organic compound" and replace with "isothiazolone biocide", in order to overcome this rejection.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically the recitation of one organic compound having melting point in a range of 30°C to 60°C is indefinite. The term "organic compound" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is not clear what the meets and

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bounds of the limitation "one organic compound having melting point in a range of 30°C to 60°C" would encompass.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Mattox (EP 0,490,565 A1, cited by applicant).

Mattox teaches an isothiazolone concentrate composition comprising a) 0.01 to 50 parts of 3-isothiazolone (including DCOIT), b) 0.0001 to 10 parts copper salt and c) optionally 40 to 99.9899 parts organic solvent including di-glycols; Mattox also teaches compositions containing from 0.01 to 30 weight of the a-c composition above in water with an emulsifier. See page 2 lin 41-page 3 lin 49, examples part 3 and claims 1-3 and 10. Regarding the limitations on the amount of solvent, copper and isothiazolone, for the above concentrations a composition containing water, an emulsifier and 30% of the composition a)-c) the solvent could be in a concentration as low as 12%, the isothiazolone could be as high as 15% and the amount of copper could be as high as 3.3% all of the ingredients are within applicants claimed range. Regarding the limitation that the composition contains at least one inorganic filler, Mattox in example 3, a paint formulation, lists the use of Ti-Pure R-902 a known titanium dioxide pigment used in

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coatings as evidenced by the teachings of DuPont's product brochure on titanium dioxide products used in coatings.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mattox (EP 0,490,565 A1, cited by applicant) in view of Payne et al. (WO 95/00019, cited by applicant).

Mattox is disclosed above. While Mattox does not mention kaolin in the description or examples kaolin is simply a mineral found in clay and Mattox does disclose the use of Attagel 50 a known clay material, therefore it is obvious that Attagel 50 clay will contain kaolin. The composition described within Mattox was disclosed as being useful as a biocide in paints.

Mattox is silent on the use of a thickener such as Xanthan gum.

Payne is used primarily for the disclosure within that thickeners such as Xanthan gum were useful in aqueous compositions containing 3-isothiazolone as a biocide, the composition was said to be useful as a preservative in paint. Xanthan gum was said to aid in suspension of particulate matter, reduce sedimentation and increase viscosity.

See abstract, page 1 lin 6-36, page 2 lin 19-37, page 4 lin 3-10 and claims 1-2.

It would have been prime facie obvious at the time of the invention to a person of ordinary skill in the art to modify the 3-isothiazolone composition disclosed in Mattox and add the Xantam gum thickener disclosed within Payne. It is generally considered to be prime facie obvious to combine compounds each of which is taught by the prior art to be useful for the same purpose in order to form a composition that is to be used for an identical purpose. The motivation for combining them flows from their having been used individually in the prior art, and from them being recognized in the prior art as useful for the same purpose. There is also clear motivation for the skilled artisan to combine the

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thickener in Payne with the composition of Mattox to aid in the suspension of particulate matter, reduce sedimentation and to adjust the viscosity of the composition of Mattox. One with skill in the art would have a reasonable expectation of success in combining the above references since they are related in the same field of endeavor and their composition makeup is very similar in that they are both disclosed as being aqueous 3-isothiazolone biocide compositions. The advantage of such a composition as already disclosed above would be that the particulates would be suspended, there would be less sedimentation within the composition and the viscosity could be adjusted by simply adjusting the amount of thickener. Also the use of thickener as disclosed by Payne would reduce the amount of organic solvent necessary, a distinct advantage since there is increasing demand to decrease the use of volatile organic compounds in all industries. As shown by the recited teachings, instant claims are no more than the combination of conventional components of biocide compositions useful in preserving paint products. It therefore follows that the instant claims define prime facie obvious subject matter. Cf. In re Kerhoven, 626 F.2d 848, 205 USPQ 1069 (CCPA 1980).

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mattox (EP 0,490,565 A1, cited by applicant) in view of Payne et al. (WO 95/00019, cited by applicant) in view of Kostansek et al. (EP 1,060,667 A2) in view of Gerigk et al. (US 5,332,430).

Mattox is disclosed above.

Mattox is silent on the use of thickeners and while Mattox mentions the use of commercial clay filler is silent on the specific filler kaolin. Mattox is also silent on the

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method to produce the compositions by dissolving DCOIT in solvent before addition of the other ingredients and is silent on melting DCOIT before addition of the other ingredients.

Payne is disclosed above and is combined with the main reference Mattox in the same manner.

Kostansek is used primarily for the disclosure within that the method of melting an active (biocides are specifically mentioned), before addition of the other ingredients was already well known in the art at the time of the invention. Kostansek is also used for the disclosure within that the melted active can also contain a solvent that it is soluble in, thus meeting the limitation of claim 9. See abstract, [0002]-[0005],[0008]-[0011] and claims 1-3. The disclosed advantage of producing a suspension concentrate of a biocide in this manner was that the method produced small particles. It was disclosed that the efficiency of the pesticides (species of biocide) is often related to the size of the pesticide particle, typically the smaller the particle the greater the efficiency due to factors such as increased release rate and wider and more uniform coverage upon application.

Gerigk is used only for the disclosure paint systems containing biocides may contain fillers such as kaolin. See col 1 lin 49-col2 lin 7, col 4 lin 64-col 5 lin 22.

It would have been prime facie obvious to a person of ordinary skill in the art at the time the claimed invention was made to combine the art described in the documents above because Mattox discloses all of applicants claimed invention except for the use of a thickener, kaolin and is silent on applicants claimed procedure to make the

composition while Payne disclosed thickeners, Kostansek disclosed the same method to make the composition and Gerigk disclosed the use of kaolin. The motivation to combine the above documents would be a method to produce an aqueous DCOIT composition by melting/dissolving the biocide prior to addition of other ingredients. The advantage of this methodology would be that the biocide particles produced are small, thus increasing the release rate and providing more uniform coverage of the biocide upon application. Thus, the claimed invention, taken as a whole was *prima facie* obvious over the combined teachings of the prior art.

### **Conclusion**

No claims are allowed. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James W. Rogers, Ph.D. whose telephone number is (571) 272-7838. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Hartley can be reached on (571) 272-0616. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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